Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

1. A census of the unemployed taken in connection with a census of population or of occupations. This has the advantage of completeness but the disadvantage of occurring only at long intervals and then perhaps at an unsatisfactory time.
2. A separate census of the unemployed taken at a period of depression or when means to care for unemployment are being considered.
3. Returns from trade unions giving the number of their members out of work or receiving out-of-work relief. The best measure of unemployment obtained from this source is the proportion of members out of work to all members. But unemployment depends upon the time one is out of work, and the best theoretical measure is the ratio between the number of idle days and the number of member days or possible labor days.
4. Those receiving public out-of-work relief are enumerated and the number reported. A distinction is drawn between those entirely out of work and those working on part time. The amount paid in relief and the cost of service are also given.
5. Employment agencies report the number of persons registering as in need of work. But the same person may register at several places, or when he registers may be at work of an unsatisfactory kind. On the other hand, when unemployment is greatest people may become hopeless and fail to register.
6. Statistics of paupers and of tramps throw some light upon the amount of unemployment.
7. Some cities maintain relief work for the unemployed and publish statistical information about them.

Professor Zizek's new book no doubt will prove of great value to German students of statistics. The first part dealing with the theory has a value less limited by lines of nationality. This part of the book might advantageously be translated and published for American students; or, better yet, a book might be prepared based upon this but substituting American material for the prevailing German data.

WALTER F. WILLCOX

Cornell University

Waste in Industry, the Report of the Committee on Elimination of Waste in Industry. New York: McGraw-Hill Book Company. 1921. xii, 409 pp.

The Federated American Engineering Societies came into being toward the end of 1920. One of the first acts of the president, Herbert Hoover, was to recommend a study into the restrictions and wastes in industry. Such a study was authorized by the executive board, and in January, 1921, fifteen engineers (whose principal interest was management engineering) were appointed as the Committee on Elimination of Waste in Industry. Two additional members were appointed later.

It was decided that the study should be in the nature of an assay or reconnaissance, carefully planned and rapidly executed. Both the findings and the method of investigation should be appraised in the light of this decision. In less than five months six typical branches of industry had been assayed and a preliminary report rendered. The volume before us is the unanimous final report. It is a volume of extraordinary significance with respect to findings and method.

With respect to the findings, which the press has made familiar, the following summary table (p. 9) will suffice:

Industry studied	Responsibility[a] for waste assayed against		
	Management	Labor	Outside contacts[b]
	Per cent	Per cent	Per cent
Men's clothing mfg.	75	16	9
Building industry	65	21	14
Printing	63	28	9
Boot and shoe mfg.	73	11	16
Metal trades	81	9	10
Textile mfg.	50	10	40

[a] "Responsibility" as here used does not mean moral responsibility for the waste, but opportunity to remedy the conditions.

[b] Signifies the public, trade relations, etc.

The waste discovered in the six industries studied was attributed by the committee to: (1) Low production caused by faulty management of materials, plant, equipment, and men; (2) interrupted production caused by idle men, idle materials, idle plants, and idle equipment; (3) restricted production intentionally caused by owners, management, or labor; (4) lost production caused by ill health, physical defects, and industrial accidents. The point of view obviously was that of the engineer, *i. e.*, the waste due to failure to utilize fully the potential labor, material, and organization power in existing plants. No special inquiry was made into the possible waste from such sources as the social organization of industry or the over-equipment of an industry.

The method of investigation is of especial interest. The first step, the selection of the personnel of the committee, is logically a phase of the method, for apparently Mr. Hoover perceived that the only practicable method in detail for a rapid assay depended for its effectiveness upon the experience brought by the individual members of the committee to their task. The committee was therefore made up chiefly of management engineers who had had experience in developing the best management methods in individual plants, who had employed the methods of objective science in their practice in working out detail standards of good management, and who could bring these standards into the work of the committee as standards of appraisal of waste in the reconnaissance.

This point cannot be overemphasized. For the committee to employ the methods of objective science in its work was impossible in a study of five months —or five years, or fifty years. Study of industry on a large scale does not lend itself to such methods. The only possible method was to match observed performance against predetermined standards. The predetermined standards had to be as nearly as possible standards determined by previous studies in detail by the methods of objective science. The most signal individual achievement in the course of the investigation was Mr. Hoover's selection of the committee. For the purpose, it could not have been equaled by any other available group.

The committee proceeded first, bringing together individual past experiences, to construct an "Evaluation Sheet"—a code of standards. Standards were divided into three grand groups—Organization, Technical, and Utilization. These were weighted by the assignment of points totaling 100. Each of these groups was subdivided into sub-groups, each sub-group standard having a weighted value; and these sub-groups were again subdivided, each standard of a sub-sub-group having a weighted value. This scheme of weighted and valued standards was set up in the form of a "questionnaire"—not really a questionnaire, but a set of guide questions for field investigators.

Plants were then inspected with respect to each standard in the scheme, and with respect to each standard were given a value according to the degree the observed condition of management approached the value assigned the standard. The value of the standards were then summed up and the plant given a rating for Organization, Technical Methods, and Utilization, and these were summed up into a rating for the plant, all values being reduced to percentages. When appraising the plant with respect to each standard, the investigator appraised also the responsibility for the conditions indicating waste, whether attributable to (*i. e.*, remediable by) management, labor, or outside influences.

It is obvious, therefore, that the method is the method of empirical judgment with respect to the setting up of a code of standards, the appraisal of the condition found against a standard, the assigning of values, and the apportionment of responsibility. But the significant thing is that back of these standards and entering into their determination is a large amount of research into management methods according to genuinely scientific methods; and, further, that seventeen engineers, independent in their experiences, in some respects rivals in their theories, agreed upon the code of standards and upon the results of the investigation. The method of empirical judgment is not always to be sneered at; it depends upon by whom, and for what purpose, and under what circumstances it is employed, and how many independent competent observers are in agreement in the judgment. A skilled buyer of cattle on the hoof can "guess" within a few pounds the weight of a steer; a skilled timber cruiser can "guess" with surprising accuracy the millions of feet in a tract of timber. Some "guesses" have in addition to experience an ancestry of scientific methods of investigation.

The committee is under no illusions concerning its method and the result. We find (p. 118) the following: "We feel that the chief value of this field report evaluation sheet is to be found not in the results of this investigation, but in that it constitutes an important *beginning* out of which will be perfected a very powerful and very valuable instrument for investigation." Also: "We are fairly well satisfied that our evaluation sets forth the *comparative* wastefulness of the . . . plants with substantial accuracy . . . too much reliance should not be placed upon the absolute accuracy of the several evaluations."

Incidentally the book will be found to be one of the best books of reference, possibly one of the best texts, for the teaching of management.

H. S. PERSON

Taylor Society, New York